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1.125(b)(2)

1                                   ADJUSTABLE FRAME FOR HOLDING PAINT ROLLER

2                                   BACKGROUND OF THE INVENTION

3       Field of the Invention:

4               The present invention ~~is related~~ relates to frames for supporting rollers ~~which~~  
5       ~~have cylinder body~~ having cylindrical bodies and may being able to roll, ~~Particularly~~  
6       and particularly, the present invention ~~is related~~ relates to a frame for supporting a paint  
7       roller for coating a pigment or a paint on ~~the~~ a wall surface of ~~the~~ a building or furniture,  
8       etc.

9       ~~Technical Background~~ Description of the Prior Art:

10              Usually a frame for supporting a paint roller has a pair of arms with generally  
11       symmetrical ~~bending shape, each~~ bent shapes. Each of the arms has its distal part  
12       generally in parallel to the other and a shaft on the distal end to insert into the hole on one  
13       of the two ends of the paint roller to support ~~and clip~~ it for rotation, ~~each~~. Each of the  
14       arms also has its joint part ~~which is~~ fixed to or formed into a T-shape joint with a handle;  
15       ~~the~~. The pair of joint parts form a rigid holding fixed length, i.e., an unchangeable  
16       distance between the two ends of the pair of shafts, it which means that ~~one of~~ the frame  
17       can clamps clamp and holds hold only one ~~longitudinal size of~~ longitudinally sized

1 paint roller, ~~that.~~ That is to say that, ~~a~~ the prior art frame is not capable of fitting and  
2 holding a variety of ~~longitudinal sizes of~~ longitudinally sized paint rollers, which  
3 ~~resulted~~ results in an inconvenience in the operation ~~with~~ of various paint rollers.

1 SUMMARY OF THE INVENTION

2 Having outlined the state of the prior art and its attendant shortages, the present  
3 invention's object is to provide an adjustable frame ~~which~~ that is capable of adjusting the  
4 holding length of the frame to support and clip a wide variety of ~~longitudinal sizes of~~  
5 longitudinally sized paint rollers, moreover, the adjustment is flexible and the clipping  
6 force is strong enough.

7 The present invention provides an adjustable frame for holding a paint roller, ~~the~~.  
8 The frame ~~comprising:~~ comprises a pair of square arms ~~which have~~ having uniform  
9 ~~bending-shape bent shapes~~ and are configured symmetrically, ~~each~~. Each of the square  
10 arms includes a distal part ~~which~~ that is opposite to the other distal part, a joint part ~~which~~  
11 that is assembled opposite to, and in line with, the other joint part, a pair of shafts ~~which~~  
12 that are opposite to each other and are respectively fixed at the ends of the distal parts to  
13 insert for inserting into the ~~hole(s)~~ holes on the two ends of ~~a~~ the paint roller, and a pair  
14 of racks ~~which~~ that are opposite to each other and are respectively fixed at the ends of the  
15 joint parts; ~~and a~~. A square tube ~~which~~ is straight, ~~the square tube~~ holds to the pair of  
16 joint parts respectively through its two ends, and holds the pair of racks into its internal  
17 space accordingly, ~~the~~. The pair of racks meshing mesh with a gear wheel, across the gear  
18 wheel, within the internal space of the square tube; ~~and a~~. A tee-joint ~~which~~ holds to the  
19 square tube, ~~both~~. Both the square tube and the tee-joint have a pair of bearing holes  
20 through their walls, ~~the~~. The pair of bearing holes holding hold up a bar, to which the  
21 gear wheel is fixed, ~~and at~~. At least one knob being is fixed to one of two ends of the bar,  
22 outside the wall of the tee-joint.

23 ~~An~~ The adjustable frame for holding a paint roller of the present invention allows  
24 an operator to freely adjust the holding length formed by the joint parts of the square arms

1    ~~which~~ that are fitted into the square tube's internal space respectively through the square  
2    tube's two ends; ~~by.~~ By rotating the knob, through the bar and gear wheel, ~~to move~~ the  
3    racks move and consequently ~~to~~ draw the distal parts away from, or close to, each other; ~~the~~  
4    The operator ~~may~~ can change the holding length of the frame =, i.e., the distance between  
5    the two ends of the pair of shafts and fit the pair of shafts tightly against any paint roller of  
6    ~~those with~~ different lengths. In other words, the present invention provides a holding-  
7    length adjustable frame that is capable of flexibly and tightly clamping and holding a  
8    variety of ~~longitudinal sizes of~~ longitudinally sized paint rollers.

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## BRIEF DESCRIPTION OF THE DRAWINGS

2     FIG. 1 is a schematic front view of an adjustable frame for holding a paint roller according  
3                    to the present invention;

4     FIG 2 is a ~~section~~ sectional view of the adjustable frame including a tee-joint, a gear  
5                    wheel, a pair of racks, joint parts and joint ends of a pair of square arms, a square  
6                    tube, and one ~~of~~ fastening set; and

7     FIG. 3 is a partially ~~section~~, sectioned side view of the adjustable frame with a handle.

1 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

2 As ~~it is~~ shown in Figures 1, 2, and 3, an adjustable frame for holding a paint roller  
3 ~~comprising: comprises~~ a pair of square arms 2 and 4 ~~which have~~ having uniform  
4 ~~bending-shape, each bent shapes. Each~~ of the pair of square arms 2 and 4 includes a  
5 distal part ~~which that~~ is in parallel to the other distal part, a joint part ~~which that~~ is  
6 assembled opposite to, and in line with, the other joint part, a pair of shafts 3 ~~which that~~  
7 are opposite to, and in line with, each other and are respectively fixed at the ends of the  
8 distal parts ~~to insert for inserting~~ into the ~~hole(s) holes~~ on the two ends of ~~a the~~ paint  
9 roller (not ~~be~~ shown), and a pair of racks 8 and 12 ~~which that~~ are opposite to each other  
10 and are respectively fixed at the ends of the joint parts: ~~and a. A~~ square tube 1 ~~which~~ is  
11 straight, ~~the square tube 1~~ holds ~~to~~ the pair of ~~joint parts~~ square arms 2 and 4  
12 respectively through its two ends, and holds the pair of racks 8 and 12 into its internal  
13 space accordingly; ~~the. The~~ pair of racks 8 and 12 ~~meshing mesh~~ with a gear wheel 9,  
14 across the gear wheel 9, within the internal space of the square tube 1; ~~and a. A~~ tee-joint 7  
15 ~~which~~ holds ~~to~~ the square tube 1; ~~both. Both~~ the pair of square ~~tube~~ arms 2 and 4 and  
16 the tee-joint 7 have a pair of bearing holes through their walls; ~~the. The~~ pair of bearing  
17 holes ~~holding hold~~ up a bar 9', to which the gear wheel 9 is fixed; ~~and one. One~~ knob 9''  
18 ~~being is~~ fixed to one of two ends of the bar 9', outside the wall of tee-joint 7.

19 The racks 8 and 12 are fixed respectively at the ends of the joint parts with screw  
20 fasteners 13 and 14.

21 The adjustable frame also ~~comprising: comprises~~ a pair of fastening sets ~~which~~  
22 that are configured respectively at the two ends of the square tube 1; ~~each. Each~~ of the  
23 pair of fastening sets includes an inner pipe 5 ~~which has~~ having male screw threads on  
24 its outer wall and an outer pipe 6 ~~which has~~ having female screw threads on its cone-

1 shaped inner wall ~~cone-shaped, the.~~ The inner pipe 5 ~~holding to~~ holds both the square  
2 tube 1 and the joint part of ~~the~~ an associated square arm 2 or 4; ~~the.~~ The outer pipe 6  
3 fitting fits the inner pipe 5 to enhance the holding force between the square tube 1 and the  
4 joint ~~parts~~ part of the associated square arm 2 or 4.

5 The tee-joint 7 includes a screw socket 15 ~~which has~~ having female screw threads  
6 on its inner wall to couple with a handle 11 and has male screw threads on its cone-  
7 shaped outer wall ~~cone-shaped~~ to couple with a screw tube 10 having female screw  
8 threads on its inner wall.

9 Before or after a coating operation, the operator may ~~loose~~ loosen the outer pipe 6  
10 from the inner pipe 5 by rotating it, then rotate the knob 9" and consequently the gear  
11 wheel 9 ~~to-move~~ moves the pair of racks 8 and 12 ~~and~~ to bring the pair of ends of the  
12 pair of shafts 3 away from, or close to, each other in order to adjust the holding distance  
13 between the pair of shafts 3. ~~In~~ By using the above adjustment, the operator ~~may fit~~ can  
14 tightly fit a new paint roller ~~that has~~ having a different length from the replaced one on  
15 the frame, and then rotate the outer pipe 6 on the inner pipe 5 to tighten the inner pipe 5  
16 for enhancing the coupling force between the joint parts of the pair of square arms 2 and 4  
17 and the square tube 1. ~~Operator~~ The operator may also fix a handle 11 into the screw  
18 socket 15 and further tighten it with the screw tube 10.

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## ABSTRACT OF THE DISCLOSURE

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### ~~ADJUSTABLE FRAME FOR HOLDING PAINT ROLLER~~

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An adjustable frame for holding a paint roller ~~comprising:~~ includes a pair of square arms, ~~each.~~ Each of the pair of square arms includes a distal part, a joint part, a pair of shafts at the ends of the distal parts, and a pair of racks ~~which that~~ are opposite to each other and are respectively fixed at the ends of the joint parts, ~~and a.~~ A straight square tube ~~which~~ holds ~~to~~ the pair of joint parts and holds the pair of racks into its internal space; ~~the.~~ The pair of racks meshing mesh with a gear wheel within the internal space of the square tube; ~~a.~~ A tee-joint ~~which~~ holds ~~to~~ the square tube, ~~a.~~ A pair of bearing holes through ~~their the~~ walls of the tee-joint and the square tube holding hold up a bar, to which the gear wheel is fixed, ~~and one.~~ One knob ~~being~~ is fixed to one of two ends of the bar, outside the wall of the tee-joint. The present invention provides a holding-length adjustable frame that is capable of flexibly and tightly clamping and holding a variety of ~~longitudinal sizes of~~ longitudinally sized paint rollers.